

Food Insecurity Will Escalate

Projections indicate that food consumption will increase at a slower rate than population in many low-income countries during the next decade, leading to a decline in per capita consumption. Many countries will also be unable to meet the minimum nutritional requirements of their people. In some countries, although their national performance shows an increase in average consumption, low-income groups remain vulnerable to food insecurity because of internal distribution problems.

Forty-seven of the 66 countries will face a declining per capita consumption trend through 2008, which, in most cases, will lead to nutritional problems. By 2008,

Table 1—Production, commercial imports, and food gaps*

The distribution gap is projected to be double the size of the status quo gap and 35 percent higher than the nutrition gap in 2008.

Region	Pro-duction	Com-mercial imports	Food gaps		
			Status quo	Nutri-tion	Distri-bution
-----Million tons-----					
North Africa					
1998	38.0	19.2	0.0	0.0	0.1
2008	44.2	23.8	0.2	0.0	0.1
Sub-Saharan Africa					
1998	138.4	8.6	6.7	13.9	17.9
2008	173.2	9.8	12.1	22.4	27.0
Asia					
1998	418.1	16.6	3.8	2.7	8.4
2008	489.8	23.4	5.7	4.7	8.7
LAC					
1998	27.5	10.3	0.4	0.4	1.8
2008	32.7	13.8	0.7	0.6	1.7
NIS					
1998	6.1	1.5	0.1	0.7	0.8
2008	7.1	2.0	0.1	0.6	0.7
Total 66 countries					
1998	628.1	56.2	11.0	17.7	29.0
2008	747.0	72.8	18.8	28.3	38.2

* in grain equivalent.

39 countries are projected to be unable to meet their nutritional food requirements.

In this study, two main food gaps are used to measure food insecurity: the status quo gap and the nutrition gap. The status quo gap is the difference between projected food supplies and base period (1995-97 average) per capita consumption (see box, p. 3). The nutrition gap is the difference between projected food supplies and the food needed to support minimum per capita nutritional standards. The food gap to maintain per capita consumption (status quo) at the 1995-97 base level for the 66 countries is estimated at 11 million tons for 1998 and is projected to be 18.8 million tons in 2008 (table 1). Many countries that cannot maintain their per capita consumption are also consuming below their nutritional targets. The food supplies needed to meet their minimum nutritional requirements are projected to rise from less than 18 million tons in 1998 to more than 28 million in 2008.

National-level analysis, however, masks the impact of unequal access to income on food security. People in

Regions and Countries

North Africa: Algeria, Egypt, Morocco, Tunisia

Sub-Saharan Africa: Cameroon, Central Africa Republic, the Congo (formerly known as Zaire), Burundi, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania, Uganda, Angola, Lesotho, Madagascar, Malawi, Mozambique, Swaziland, Zambia, Zimbabwe, Benin, Burkina Faso, Cape Verde, Chad, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo

Asia: Afghanistan, Bangladesh, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Vietnam

Latin America and Caribbean (LAC): Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Peru

NIS: Armenia, Azerbaijan, Georgia, Kyrgyzstan, Tajikistan

lower income groups have larger nutrition gaps than wealthier people. The distribution gap is the amount of food required to increase food consumption for all income groups to the level to meet nutritional requirements (see box, p. 4). This gap is projected to increase 32 percent during the projection period to 38.2 million tons by 2008. The growth of this gap far surpasses the growth in the number of people becoming food insecure. In fact, the number of people failing to meet

their nutritional requirement is projected to grow by 3 percent—from roughly 1.1 billion in 1998 to 1.13 billion by 2008. This means distribution-related nutritional problems will intensify more than they will spread.

A study by the United Nations Food and Agriculture Organization projected a decline in the number of undernourished people between 1990 and 2010. This assessment was made despite the study's assumption

Model Description and Definitions

The Food Security Assessment model used in this report was developed at USDA's Economic Research Service for use in projecting food consumption and access, and the food gap in 66 low-income countries—37 in Sub-Saharan Africa, 4 in North Africa, 11 in LAC, 9 in Asia, and 5 in the New Independent States (NIS) of the former Soviet Union. The projection period covered in this study is the 10-year period 1998 through 2008. The reference to food includes grains, root crops, and "other." The "other" category includes most other components of the diet. These three food commodity groups account for as much as 90 percent of all calories consumed in the study countries. Root crops are generally not traded, while the bulk of all food imports of these countries, commercial or food aid, is in the form of grains.

Food security of a country is evaluated based on the gap between projected domestic food consumption (produced domestically and imported commercially) and a consumption requirement. Although food aid is expected to be available during the projection period, it is not included in the projection of food consumption. It should be noted that while projection results will provide a baseline for the food security situation of the countries, they depend on assumptions and specifications of the model. Since the model is based on historical data, it implicitly assumes that the historical trend in key variables will continue in the future.

Projections of food gaps for the countries are based on differences between consumption targets and estimates of food availability, which are domestic supplies (production plus commercial imports) minus nonfood use. The estimated gaps are used to evaluate food security

of the countries. Food gaps are projected using two consumption criteria:

Status quo target, where the objective is to maintain average per capita consumption of the recent past. The most recent 3-year average (1995-97) is used for the per capita consumption target in order to eliminate short-term fluctuations.

Nutrition-based target, where the objective is to maintain the minimum daily caloric intake standards recommended by the UN's Food and Agriculture Organization (FAO). The caloric requirements (based on total share of grains, root crops, and "other") used in this assessment are those necessary to sustain life with minimum food-gathering activities. They are comparable to the activity level for a refugee—they do not allow for play, work, or any activity other than food gathering.

The status quo measure embodies a "safety-net" criterion by providing food consumption stability at recently achieved levels. The nutrition-based target assists in comparisons of relative well-being. Comparing the two consumption measures either for countries or regions provides an indicator of the need, depending on whether the objectives are to achieve consumption stability and/or to meet a nutritional standard. Large nutrition-based needs relative to status quo needs, for example, mean additional food must be provided if improved nutrition levels are the main objective. In cases where nutrition-based requirements are below status quo consumption needs, food availability could decline without risking nutritional adequacy, on average. Both methods, however, fail to address inequalities of food distribution within a country.

of a decline in the growth rate of agricultural output during the projection period compared with 1970-90. Lower population growth is projected, resulting in higher per capita food consumption and, therefore, less nutritional problems. The incidence of undernu-

Measuring a Distribution Gap

In the estimation of nutritional deficits in developing countries, unequal distribution of food consumption is a major concern. We have estimated a distribution gap which measures the food needed to meet nutritional requirements under a targeted policy scenario. Under this scenario, consumption by each specified group (by income or any other category) is targeted to rise by the amount necessary to meet that particular group's nutritional requirements. The distribution food gap is projected to be more than 38 million tons in 2008, this is 33 percent higher than the projected gap to meet aggregate nutritional requirements.

trition is projected to decline in all regions except Sub-Saharan Africa (12).¹

A recent FAO report indicates that the total number of chronically undernourished people in developing countries increased slightly between 1990-92 and 1994-96, from 822 million to 828 million (14).

The projections of food gaps in this study do not include external food assistance. In the past, food aid has played an important role in reducing food insecurity in low-income countries, but it remains inadequate to offset the full magnitude of needs. In fact, food aid shipments have declined in recent years, principally due to smaller budget outlays in donor countries. From the mid-1980's to the early 1990's, total food aid shipments exceeded 10 million tons annually. During the last 2 years, shipments have averaged around 5 million tons. Global food aid in 1997/98 was 5.3 million tons. At this level, food aid could fill about half the estimated food gap necessary to maintain consumption and roughly 30 percent of the nutrition gap for the 66 countries in 1998.

¹ Italicized numbers in parentheses refer to sources listed in the References.